



ROYAL SCHOOL OF APPLIED AND PURE SCIENCES

DEPARTMENT OF PHYSICS

COURSE STRUCTURE & SYLLABUS OF BSc. (HONOURS) PHYSICS COURSE

(6 SEMESTER COURSE)

Course Structure and Syllabus

For

Under Graduate

PHYSICS (Honours)

Under

Choice Based Credit System

2018

COURSE STRUCTURE FOR B.Sc. (Honours) IN PHYSICS

S E M E S T E R	CORE COURSE (19)	credit	Ability Enhancement Compulsory Course (AECC) (9)	credit	Ability Enhancement Elective Course (AEEC) (2) (Skill Based)	credit	Elective: Discipline Specific DSE (5)	credit	Elective: Generic (GE) (8)	credit	No of papers each semester
I	Mechanics and Properties of Matter	4	Comm. English – I	1					GE -1	3	8
	Mathematical Physics-I	4									
	Modern Physics	4	Behavioural Science-I *	1					GE -2	3	
	Physics (H) Lab-I	3									
II	Wave, Oscillation and Ray Optics	4	Comm. English – II	1					GE -1	3	8
	Mathematical Physics-II	4	Behavioural Science-II *	1							
	Atomic and Molecular Spectroscopy	4							GE -2	3	
	Physics (H) Lab-II	3									
III	Heat and Thermodynamics	4	Environmental Science	2	AEEC/SEC/- 1*	2			GE -1	3	8
	Mathematical Physics-III	4	Comm. English-III	1							
	Physics (H) Lab-III	3									
IV	Electricity and Magnetism	4	Comm. English-IV	1	AEEC/SEC/- 2*	2			GE -1	3	7
	Mathematical Physics-IV	4									
	Physics (H) Lab-IV	3									
V	Classical Mechanics	4	Comm. English -V	1					DSE-1 Laser Physics	4	6
	Wave Optics	4							DSE-2 Solid State Physics	4	

	Seminar	3									
VI	Quantum Mechanics	4	Comm. English – VI	1			DSE-3 Statistical Mechanics	4			6
	Electrodynamics	4					DSE-4 Theory of Relativity	4			
							Seminar/Literature Survey	3			
TOTAL	No. of papers-19	71	No. of papers-9	10	No. of papers-2	4	No. of papers-5	19	No. of papers-8	24	43

NOTE: TOTAL CREDITS =23+23+22+20+20+20=128

I. Ability Enhancement Elective Course (AEEC) (Skill Based):

	AEEC/SEC-1 (in third semester) (Choose any one)	AEEC/SEC-2(in fourth semester) (Choose any one)
1	ILD-1	ILD-2
2	FRENCH-1	FRENCH-2
3	C++	LATEX
4	Any other course offered by other schools of RGU and opted by Student	Any other course offered by other schools of RGU and opted by Student

II. Elective: Discipline Specific DSE

	DSE 1-2 (in fifth semester)	DSE 3-4 (in sixth semester)
1	DSE-1 Laser Physics	DSE-3 Statistical Mechanics
2	DSE-2 Solid State Physics	DSE-4 Theory of Relativity

II. A. (i) Generic Elective Papers (GE) (any two) from other Departments/ Disciplines: (Credit: 03 each) for 1st to 4th Semester

- (a) Mathematics (b) Chemistry (c) Statistics
(d) Any other subject offered by other school

B. Generic Elective Papers (GE) (any four) for other Departments/ Disciplines: (Credit: 03-06 each)

1. Physics –I
2. Physics –II (Theory + Laboratory)
3. Physics –III
4. Physics –IV (Theory + Laboratory)

Note: For Project/seminar or similar credited courses, mode and duration of examination may vary depending upon courses.

Contents

Course structure and Syllabus of B.Sc.(Honours) in Physics 6 Semester Course

Semester	Subject code	Subject Name	Credit	Page No.
I	PHY012C101	Mechanics and Properties of Matter	4	1-2
	PHY012C102	Mathematical Physics I	4	3
	PHY012C103	Modern Physics	4	4
	PHY012C114	Physics (H) Lab - I	3	5
II	PHY012C201	Wave, Oscillation and Ray Optics	4	6-7
	PHY012C202	Mathematical Physics II	4	8
	PHY012C203	Atomic and Molecular Spectroscopy	4	9
	PHY012C214	Physics (H) Lab - II	3	10
III	PHY012C301	Heat and Thermodynamics	4	11-12
	PHY012C302	Mathematical Physics III	4	13
	PHY012C313	Physics (H) Lab - III	3	14
IV	PHY012C401	Electricity and Magnetism	4	15-16
	PHY012C402	Mathematical Physics IV	4	17
	PHY012C413	Physics (H) Lab - IV	3	18